Orthomolecular nutrition is now the choice of millions of people. It is both corrective, preventive, and treats the whole person's biochemical imbalances. Orthomolecular nutrition can offer immediate as well as long-term benefits.

Dr. Abraham Hoffer, a noted orthomolecular psychiatrist, published a paper in 1978 that stated, "Vitamin deficits in the brain may cause mental illness." Research scientists uncovered evidence that mental illness and other degenerative diseases may be linked by similar metabolic processes dependent upon nutrition. In all body cells vitamins are found in minute amounts. They actually combine with the molecular structure of enzymes to help the enzymes work properly. Our body's enzymes cannot function if an ample amount of vitamins and amino acids are not available, and the required cellular process will not continue.

A major problem is that mental illness could result if these cellular processes that relate to brain function are not stopped. Many psychiatrists will not accept the fact that brain function is affected by nutrition. They believe instead that brain function is completely unaffected by nutrition, and the only solution is toxic drugs. In Dr. Hoffer's book, Orthomolecular Nutrition, he sums up the feelings of the ridged medical community, "It seems that many psychiatrists and their colleagues such as psy- chologists and neurologists consider the brain is not an organ of the body that needs nourishment." The orthomolecular concept clearly states that cells must be provided with the right molecules in optimum amounts.

Each of your brain cells contains about ten billion molecules of protein, carbohydrates, fats, vitamins, nucleic acids and amino acids. Your body cells die because they do not proper nourishment. They get poisoned by toxins such as cigarette smoke. Many scientists now work on the premise that nerve cells die of malnutrition. This occurs when the diet is totally junk food and no supplements or amino acids are taken to support proper cell growth and brain function. In my book, Heal with Amino Acids, I outline the vitamins and amino acids needed for proper brain and body function. There is a strong possibility that psychological disorders may be directly related to diet and nutrient metabolism. I have found this to be true in many hyperactive children and, when their diet is corrected and proper supplementation is provided, the change is noticeable within weeks. Orthomolecular practitioners believe abnormal behavior can be a metabolic disorder, airborne, food or chemical sensitivities. Doris Rapp, M.D. has done extensive research in this area, and her clinical testing supports the needed evidence. Dr. Rapp has demonstrated incorrect concentrations of specific nutrients in the brain can and do cause certain forms of mental disorders. An adult or child who is having mental problems is more than likely to have something wrong in the molecules of the brain. In cases of depression, there are not enough neurotransmitters and norepinephrine at the right location in the brain to ensure the availability of chemical precursors of norepinephrine. Norepinephrine is synthesized from the amino acids phenylalanine or tyrosine. Of the four essential nutrient groups, amino acids may be the most fundamental to brain chemistry. The dietary dependence of the neurotransmitters dopamine, serotonin and histamine upon their amino acid precursors is now well established. Neurotransmitters can be influenced to a great degree by the amino acids in the diet or by supplementation. Interest in amino acids in therapeutics is continuing to grow. Tyrosine, the stress amino acid, has been proven to be effective for depression in children and adults. Tyrosine was clinically tested in the Department of Psychiatry at Harvard Medical School.

The use of tyrosine in depression increases the levels of norepinephrine, serotonin, and other neurotransmitters. This helps restore a sense of well-being. For those with depression, obsessive-compulsive disorder, insomnia, headaches, and addiction. 5-HTP or 5-hydroxytryptophan gives relief. 5-HTP is responsible for serotonin. Serotonin is the key to numerous brain functions. 5-HTP can be used alone or in combination formula such as Teen Link™. Other amino acids that have a proven therapeutic track record include: DLPA for chronic pain and depression, taurine for nervous twitches and hyperactive behavior. GABA for anxiety, muscle spasms, nervous stomach, and post traumatic stress disorder. Glutamine enhances memory and concentration.

The brain is the most undernourished organ in the body, yet it is the busiest. Prescription drugs only address symptoms. Amino acids and nutrients treat the cause. For more information on my books, call 1-800-669-2256.


**ALPHA-LIPOIC ACID: A POWERFUL ANTIOXIDANT**

Though scientists discovered alpha-lipoic acid in 1951, they are only now realizing its powerful antioxidant properties.

Alpha-lipoic acid works as a coenzyme, helping the body break down sugar for energy. The body also routinely converts it to dihydrolipoic acid, which may be an antioxidant more powerful than alpha-lipoic acid itself.

Like other antioxidants, alpha-lipoic acid interacts with free radicals to help prevent excessive free radical reactions that can promote cancer, heart disease, and many other illnesses.

It also does a lot more. Alpha-lipoic acid neutralizes free radicals in both the fatty and watery regions of cells. It quenches both oxygen and nitrogen free radicals, and it helps the body regenerate other antioxidants such as vitamins C and E, glutathione and Co-Q10.

In Germany, this natural substance is approved for the treatment of diabetic neuropathy. Recent studies have found that alpha-lipoic acid can also protect brain cells against free radical damage and toxins, and it might improve memory in the elderly.

Additionally, alpha-lipoic acid appears to help prevent overactivation of "nuclear factor kappa-B," a protein molecule that can influence the expression of genes and whose over-activity has been implicated in the replication of HIV and in the development of cancer.

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**TRACE MINERALS AND HEALTH**

Nutrition science continues to discover the roles that trace minerals play in human health. Numerous trace minerals have been proven essential to humans, such as:

- Chromium is necessary for the transport of glucose into the body’s cells, and deficiency results in the high blood sugar and elevated blood cholesterol levels associated with diabetes and coronary heart disease.
- Copper is a critical element in the formation of hemoglobin.
- Manganese is essential for functions including healthy fetal development, proper carbohydrate metabolism and bone formation.
- Selenium works with vitamin E as an antioxidant. Selenium may also protect against environmental pollutants, prevent cancer and heart disease, slow aging, improve immune function and help in the treatment of arthritis.
- Zinc is a component of all cells, aiding in the growth and repair of tissues and functioning as a cofactor for at least 70 different enzymes. Zinc deficiency can cause such effects as growth retardation, delayed sexual maturation, skeletal abnormalities and depressed immunity.

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**NUTRITIONAL HELP FOR MENTAL ILLNESS**

Research demonstrating the efficacy of orthomolecular psychiatry’s use of nutrition for their mental illness patients.

In a typical case, a woman suffering from recurrent schizophrenic attacks was found to be affected by over-dependency on certain nutrients. Hypoglycemia and yeast syndrome. Treatment consisting of megavitamin therapy, an anti-hypoglycemic diet and probiotics to eliminate the yeast infection in her intestine resulted in no recurrence of schizophrenic symptoms.

Double-blind research into nutritional treatment of schizophrenia shows success results from use of nicotinic acid and vitamin B6 therapy, and improved mental health through niacin therapy.

Other research on nutritional treatment of mental illness found that thiamin, lithium and tryptophan reduced aggressive behavior; and phosphatidyl choline, Ginseng biloba and acetyl-L-carnitine helped Alzheimer’s patients.

One psychotically paranoid patient who suffered from functional hypoglycemia had improved behavior after being placed on an anti-hypoglycemic diet.

Orthomolecular treatment of mental illness is slow but longer-lasting if patients remain on drugs indefinitely, and there are generally no major side effects from nutrition therapy.

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**ANTIOXIDANTS WORK SYNERGISTICALLY!**

Recently, three major studies cast doubt on the efficacy of antioxidants, particularly beta-carotene, as agents protective against free radicals. However, the studies are all flawed by a basic misunderstanding of how antioxidants work.

Antioxidants scavenge free radicals. A single free radical can damage enzymes, other proteins within cells and, most devastingally, the fragile lipid (fat) membranes that are within and surround the cell, which can lead to mutations and cell death.

Antioxidants are key elements in complex cellular interactions and work synergistically. The studies mentioned all failed to take into account the complexity of antioxidant activity and focused on only one of the large number of antioxidants. This ignored the fact that antioxidants there is no magic bullet effect—they are interlinked and interdependent.

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**References and Resources**


This article is not intended to give medical advice or replace the services of a physician. It is for educational purposes only.

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